

Tennessee Pollution Prevention Partnership Success Story



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Recovery Of Powdered Metal Eliminates Hazardous Waste

The Member

Standard Aero (Alliance) Inc., located in Blount County, Maryville, Tennessee is a subsidiary of Standard Aero Commercial Services Division headquartered in Winnipeg, Canada. The commercial services division is part of Standard Aerospace Group, a leading international maintenance service provider to the aerospace industry. Standard Aerospace Group has operations and customers located around the world and employs over 4,800 people. Manufacturing facilities are located in Canada, USA and Europe.

The Standard Aerospace Group is the world's largest independent small to intermediate gas turbine engine and accessory repair-and-overhaul facility. At the Maryville location, Standard Aero (Alliance), Inc., performs repair and overhaul for Pratt & Whitney Canada, Rolls Royce, and Honeywell, gas turbine aviation and industrial application engines.

The Story

Stringent quality requirements for aerospace components, plus product liability exposure, mandates that remanufactured parts be as good or better than original equipment manufactured for the application. Additionally in many instances, lack of availability of a replacement part could permanently put a unit out of service. In order to alleviate this problem and still satisfy the rigid quality requirements, Standard Aero (Alliance), Inc. has developed, incorporated, and utilizes a specialized repair process. In the process, a proprietary powder metal is sprayed on a parts surface to enhance its wear characteristics. The powder metal is applied in a plasma stream and the exhaust from this repair operation is directed through an air pulse, 24-

filter cartridge baghouse. The plasma spray baghouses historically generated approximately one 55-gallon drum of metal powder overspray per week. Initially, all the metal powder collected in the baghouse was handled as hazardous waste, requiring stabilization and land filling in a Class C landfill.

The Success

Two goals of the Standard Aero (Alliance) Inc. Maryville facility are (1) to generate no hazardous waste, and (2) to landfill nothing. In 2003, Standard Aero (Alliance) Inc established a challenging goal to eliminate this hazardous waste stream and find a viable alternative disposal method for this waste powder. We are most delighted at the ultimate outcome. A vendor was found who could recycle the plasma overspray and recover the valuable metals, thus eliminating the costly hazardous waste stream and in its place incorporating a positive cash flow from the reclaimed material. The recycler recovers the individual metals from the overspray through a smelting process.

The Pollution Prevented

Prior to 2003, Standard Aero (Alliance) Inc. was processing the plasma overspray as a hazardous waste, which was being stabilized and land filled. The Standard Aerospace's Standard Aero (Alliance) Inc. Maryville facility produced 16,400 pounds of plasma overspray in 2002. In 2003, a slack year, 9,055 pounds were produced of which 2755 pounds were recycled. So far in 2004, all 26,455 pounds of plasma overspray produced have been recycled.

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